



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,217	03/31/2006	Claus Augenstein	016906-0480	7917

22428 7590 02/04/2009
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

WALBERG, TERESA J

ART UNIT	PAPER NUMBER
----------	--------------

3744

MAIL DATE	DELIVERY MODE
-----------	---------------

02/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,217	Applicant(s) AUGENSTEIN ET AL.	
	Examiner Teresa J. Walberg	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 9 is objected to because of the following informalities: In claim 9, at line 1, "heat exchanger a" should be deleted. Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 10-19, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911).

Fischer et al disclose a heat exchanger (Fig. 2) for use in motor vehicles (see abstract) including tubes having tube ends and fins arranged between the tubes (Fig. 2), at least one laterally arranged header box (Fig. 1), the header box having a bottom with openings (14) for receiving the tube ends (Fig. 1), a cover (46 in Fig. 2), and an inlet or outlet connecting pipe (36, 38), the heater box being capable of having been at least partially produced by internal high pressure forming of a metallic semi-finished product (Fig. 1), the cover and the bottom being a single piece (Fig. 1), the cover and the connecting pipe being a single piece that could have been produced by IHF (Fig. 1), the header box having at least one open end surface which is closed by a cover which is capable of being soldered into place (Fig. 2), the connecting pipe being arranged laterally on the

Art Unit: 3744

header box (Fig. 1). Note that product by process limitations in an apparatus claim are considered to be met if the apparatus could have been made by the listed process, whether it actually was or not.

Fischer et al does not disclose the heat exchanger being used as a charge air cooler, the cover being welded to the bottom, the wall thickness, and the bottom portion having a specified amount of curvature. It would have been obvious to one of ordinary skill in the art to use any desired amount of curvature of the bottom portion of the housing and any desired wall thickness based on the proportions of the other parts of the device and the pressures at which the device was intended to be used.

Olson et al discloses a heat exchanger being used as a charge air cooler (see abstract) and the cover being welded to the bottom (col. 3, line 40).

It would have been obvious in view of Olson et al to use the heat exchanger of Fischer et al as a charge air cooler, including providing any needed changes in proportions, the motivation being to enable use of the heat exchanger with other desired fluids, and to weld the cover to the bottom, the motivation being to securely hold the parts together.

4. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and further in view of Heine (DE 19953785)(cited by applicant).

Fischer et al in view of Olson et al disclose a heat exchanger having the claimed structure with the exception of the connecting pipe being bent or curved. However, Heine discloses a heat exchanger having a connecting pipe which is bent or curved (see the pipes in Figs 1 and 2). It would have been obvious in view of Heine to provide a bent or curved connecting pipe for the heat exchanger of Fischer et al, the motivation being to enable easier connection of the device.

5. Claims 8 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and further in view of Haussmann (6,302,196).

Fischer et al in view of Olson et al disclose a heat exchanger having the claimed structure with the exception of a longitudinal bead capable of having been made by pressing from the outside and/or IHF from the inside, the longitudinal bead being of conical or flattened design and extending along at least a long axis of the header box.

Haussmann discloses a heat exchanger housing including longitudinal bead (60) capable of having been made by pressing from the outside and/or IHF from the inside (see Figs. 1 and 2), the longitudinal bead being of conical or flattened design and extending along at least a long axis of the header box (60 in Fig. 1).

It would have been obvious in view of Haussmann to use a longitudinal bead capable of having been made by pressing from the outside and/or IHF from

Art Unit: 3744

the inside, the longitudinal bead being of conical or flattened design and extending along at least a long axis of the header box with the heat exchanger of Fischer et al in view of Olson et al, the motivation being to strengthen the header and to enable insertion of partitions.

6. Claims 8, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and further in view of Jang (2003/0221819).

Fischer et al in view of Olson et al disclose a heat exchanger having the claimed structure with the exception of a longitudinal bead capable of having been made by pressing from the outside and/or IHF from the inside, the longitudinal bead being of conical or flattened design and extending along at least a long axis of the header box, and the bead forming a depression.

Jang discloses a heat exchanger housing including a longitudinal bead (the longitudinal indentations along the top of the header in Fig. 1) capable of having been made by pressing from the outside and/or IHF from the inside (see Figs. 1 and 2), the longitudinal bead being of conical or flattened design and extending along at least a long axis of the header box (Figs. 1 and 2), and the bead forming a depression (Figs. 1 and 2).

It would have been obvious in view of Jang to use a longitudinal bead capable of having been made by pressing from the outside and/or IHF from the inside, the longitudinal bead being of conical or flattened design and extending

Art Unit: 3744

along at least a long axis of the header box, and the bead forming a depression with the heat exchanger of Fischer et al in view of Olson et al, the motivation being to strengthen the header.

7. Claims 9 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and Haussmann (6,302,196) and further in view of Richards (3,195,624).

Fischer et al in view of Olson et al and Haussmann disclose a heat exchanger having the claimed structure with the exception of the longitudinal bead having a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases and the bead forming a depression.

Richards discloses a heat exchanger having a bead (9) with a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases (Fig. 1) and the bead forming a depression (Fig. 1).

It would have been obvious in view of Richards to use a longitudinal bead a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases and the bead forming a depression with the heat exchanger of Fischer et al in view of Olson et al and Haussmann, the motivation being to adjust the cross section of the header.

8. Claims 9 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and Jang (2003/0221819) and further in view of Richards (3,195,624).

Fischer et al in view of Olson et al and Jang disclose a heat exchanger having the claimed structure with the exception of the longitudinal bead having a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases.

Richards discloses a heat exchanger having a bead (9) with a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases (Fig. 1).

It would have been obvious in view of Richards to use a longitudinal bead a cross section which increases in a direction pointing away from the connecting pipe while a cross sectional area of the header box decreases with the heat exchanger of Fischer et al in view of Olson et al and Jang, the motivation being to adjust the cross section of the header.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sutcliffe is cited to show a header with a longitudinal bead.

Art Unit: 3744

10. Applicants' arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

The applicants argue that the Olson does not show a longitudinal bead as required by claim 8. The portion of Olson considered to be a longitudinal bead is the un-numbered triangular mounting protrusion shown in Fig. 1 at the lower outer portion of each header. Upon further consideration this rejection has been withdrawn, since the protrusions shown by Olson would not be formable using claimed process steps.

The applicants argue that Fischer does not show the heat exchanger being a charge air cooler. However, this structure is shown by Olsen et al.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/